Jazz

High Definition
Video Recorder with Camera

HDV155
User Manual

FCC statement

This device complies with part 15 of FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

Pertinent testing documentation is available for verification.

This product also complies with Canada standard ICES 003.

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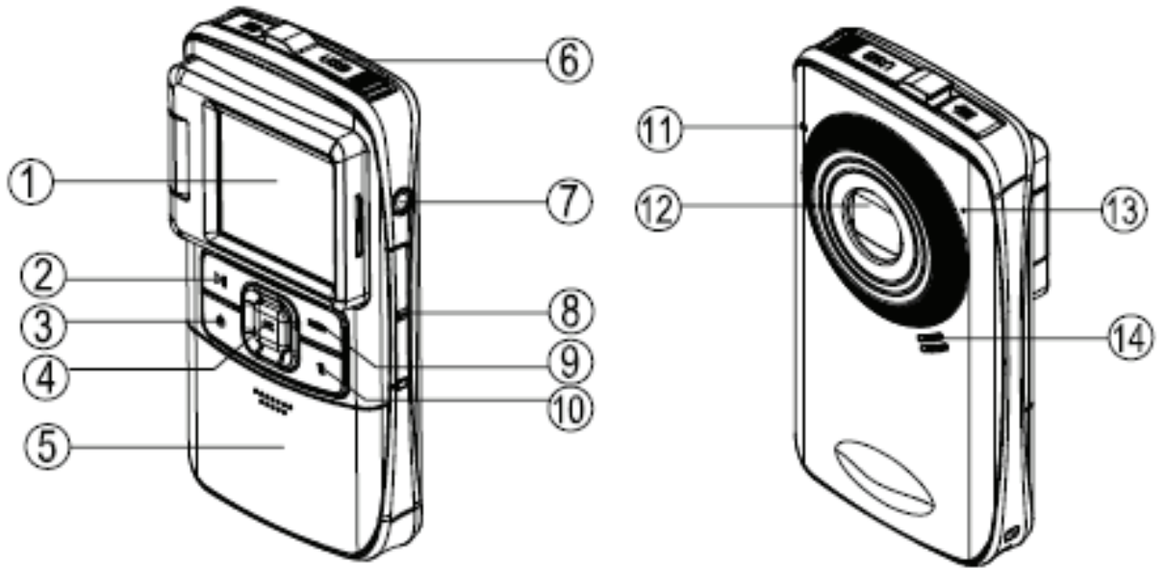
Thank you for purchasing this video recorder with camera. Please read these operating instructions carefully in order to use the digital video camera correctly and maximize your enjoyment. Keep the manual in a safe place so that you can refer to the instructions later when necessary.

Precautions

Before using the video camera, please ensure that you carefully read and understand the safety precautions described below.

- Do not try to open the case of the video camera or attempt to modify this video camera in any way. If required, maintenance and repairs should be carried out only by authorized service providers.
- Keep the video camera away from water and other liquids. Do not use the video recorder if your hands are wet; keep your camera dry and clean.
- Use only recommended AAA alkaline batteries.

1. Parts of the video recorder



1：LCD screen

2：Mode button

3：Power button

4：Shutter/OK button

▲ + Up button/Zoom In

▼ - Down button/Zoom Out

◀ Left button/Change resolution

▶ Right button/Self-timer

5：Battery cover

6：USB connector/ cover

7：AV out jack

8：SD card slot/ cover

9: Menu button

10: Display/Delete button

11: Busy LED

12: Lens

13: Microphone

14: Speaker

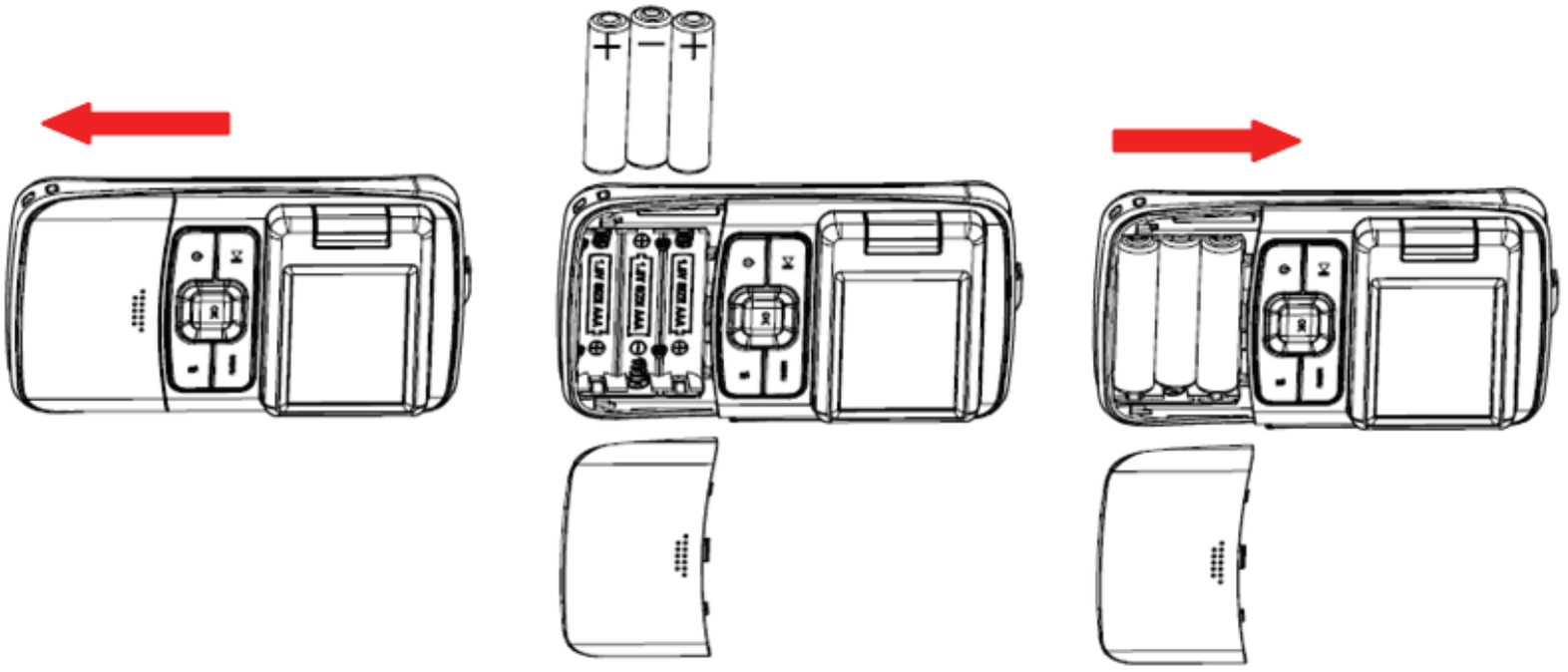
2. Preparing for using

Installing the Battery

1: Slide down and open the video recorder battery door.

2: Insert three AAA-size batteries with the positive (+) and negative (-) poles matching the markings inside the battery compartment.

3: Slide and close the battery door as shown below.



Inserting the Memory Card

Camera does require SD Memory Card inserted to record and store video clips or taken images.

1. Turn off the camera before inserting or removing the SD memory card. Grip with fingernail to lift and swing open the SD card slot rubber cover.

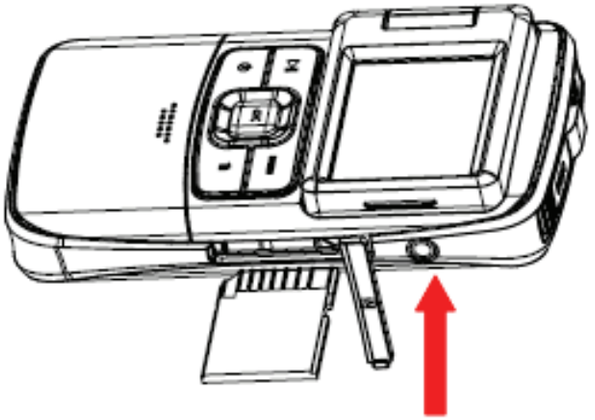
2. Orient the card correctly and do not force the card when inserting

- The SD memory card has the LOCK protect switch used to protect data from accidental deletion. Therefore, whenever you want to record, format or delete files from the SD card, set the protect switch to the non-LOCKed position.

3. Locate the card slot on the bottom of the camera and insert the SD card as illustrated. Press the card until the card is fully down and latched.

4. To remove; press SD card down, then it will pop up and be easily removed.

- **Do not insert any other object except the SD/SDHC memory card into the camera SD card slot.**
- **Keep the camera turned OFF while inserting or removing the SD card.**



Format the memory card

Please format the SD card if it is new or if it was used with another device. Download important files to your computer before formatting as the formatting will erase all data from the SD Card.

1: Turn the power ON (when the card is inserted) and set the video recorder to the Setup Menu. Press the **RIGHT** button to select [Setup].

2: Press the **UP** or **DOWN** button to select **[Format.]** then press the **SHUTTER/ OK** or **RIGHT** button to launch the submenu.

3: Press the **UP** or **DOWN** button to select the item [YES] and then press the **SHUTTER/ OK** button to execute formatting the card.

Setting the Language

You have an option to select the **Language** used for displayed commands and information; follow below steps if required:

1: Turn the power ON, and set the video camera to the Setup Menu. (See details on Page 21). Press the **RIGHT** button to select [Setup].

2: Press the **UP** or **DOWN** button to select **[Language]** then press the **SHUTTER/ OK** or **RIGHT** button to launch the submenu.

3: Press the **UP** or **DOWN** button to select the desired language and then press the **SHUTTER/ OK** button to confirm the setting.

4: Press the **MENU** button to close the menu.

Setting the date and time

1: Turn the power on (hold button down for 2 seconds) and set the video recorder to the Setup Menu.

2: Press the **UP** or **DOWN** button to select [**Date&Time..]** then press the **SHUTTER/ OK** or **RIGHT** button to launch the submenu.

3: Press the **UP** or **DOWN** button to change the highlighted value. Press the **LEFT** or **RIGHT** button to move the cursor between settings.

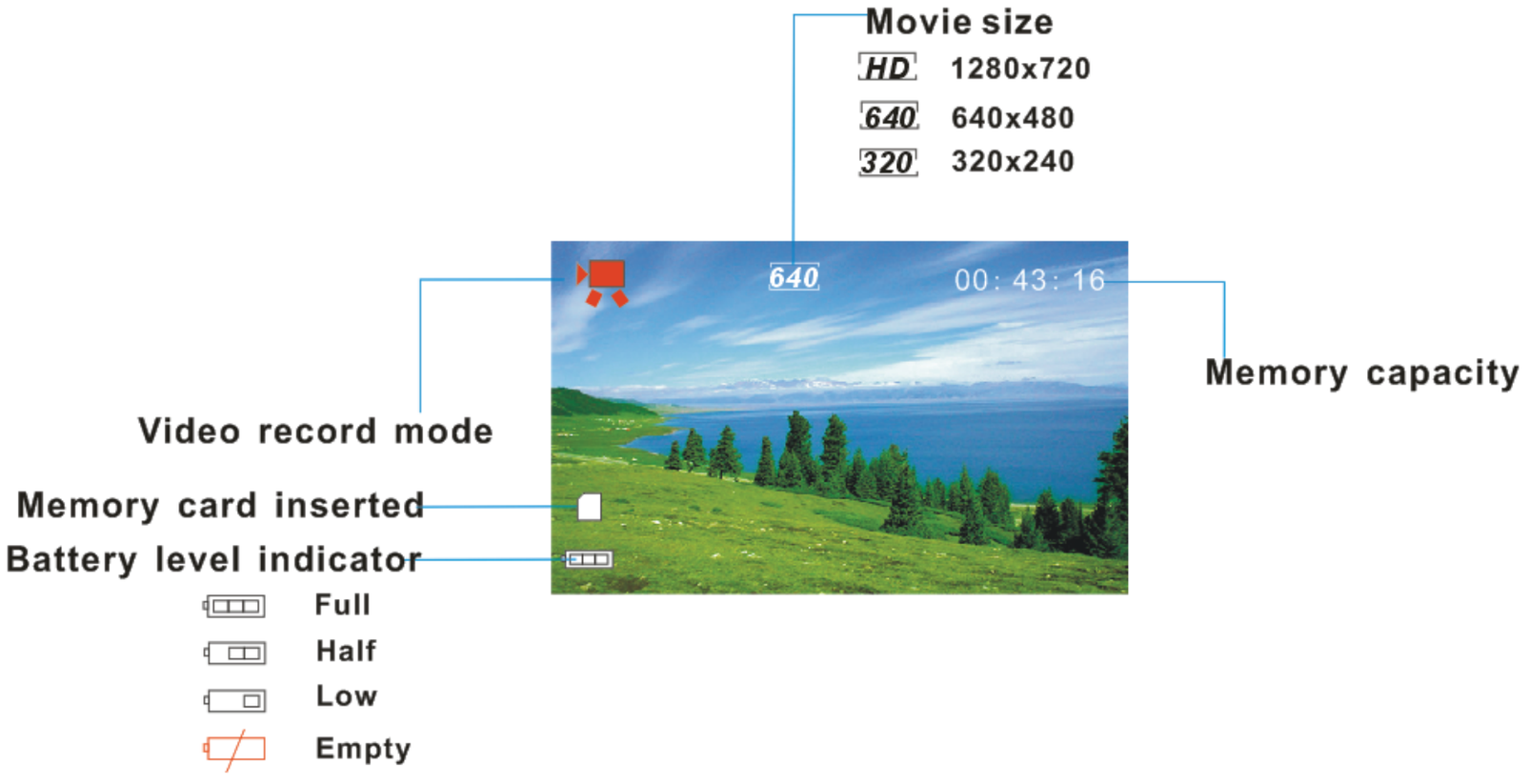
4: Press the **SHUTTER/ OK** button to confirm the setting.

5: Press the **MENU** button to close the menu.

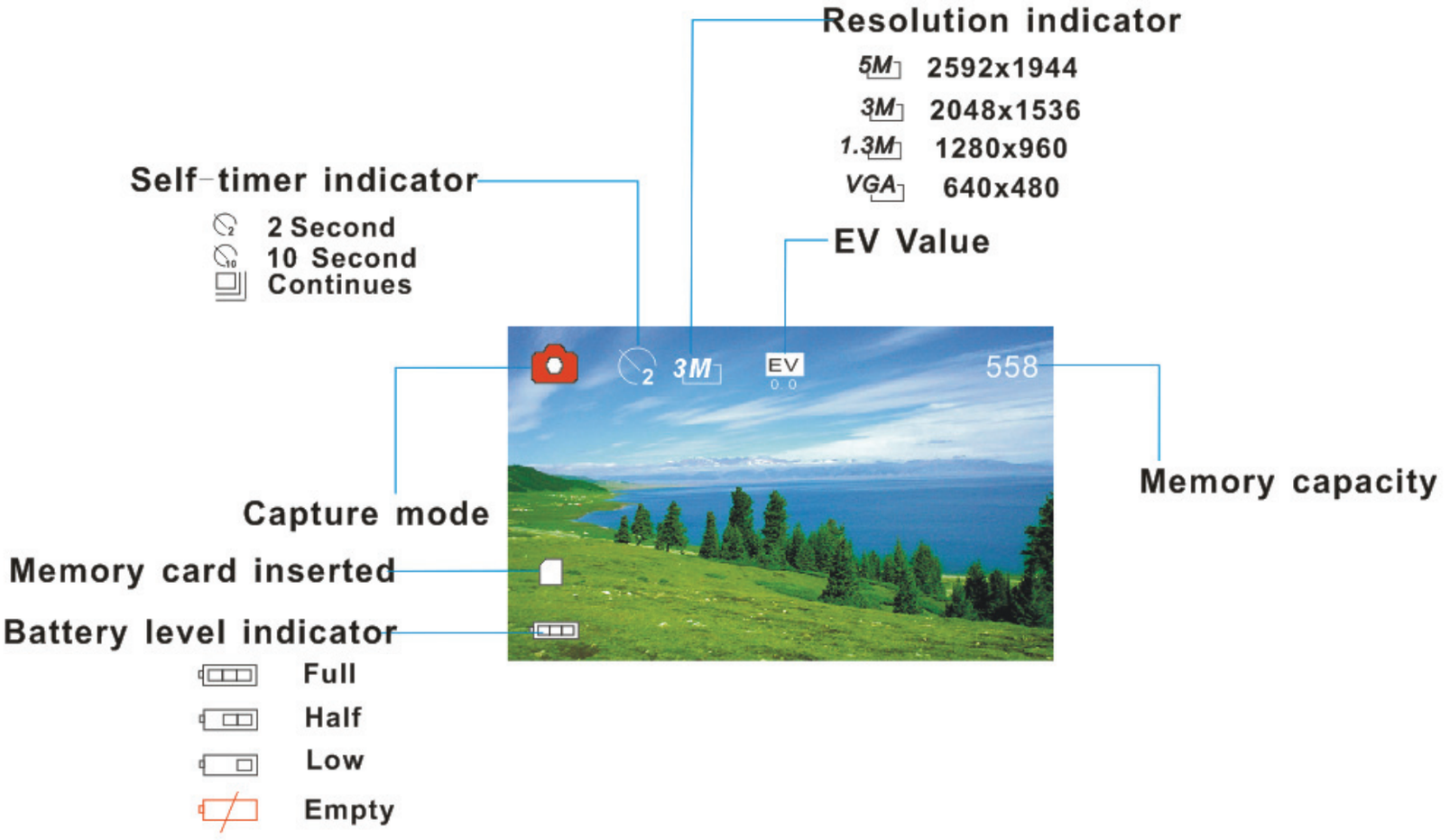
Note that after replacing batteries you need to reset the time / date again.

Monitor screen display

Video mode



Capture mode



Playback mode

Display/ Delete Button (part 10) – Press this **display button** once in video mode or Capture mode to display live image (no icons will be visible), press button again to dim the image and press again to restore original bright screen with icons. This button (10) is also used as **quick delete button** in Playback mode to delete current image. See page 26 for details.

3. Using your video recorder

Turning the recorder ON and OFF

1. Press the **POWER** button for 2 seconds to turn ON video recorder.
2. Press the **POWER** button again to turn OFF the recorder.

To save battery power, the recorder automatically turns off after a short period of time if no button is pressed. Press the POWER button to power the camera back ON. You can change the power-OFF time by setting the function **[Power Save]** in the Setup menu

Change the MODE of the recorder

Your video camera has three selectable modes: **Video, Capture, and Playback mode.** Press Mode button to change modes sequentially.

1. Press the **POWER** button and the camera will become active and set in **Video Recording Mode**.
2. Press the **MODE** button once to select the **Capture** mode for taking

still pictures.

3. Press button again to select the **Playback Mode**.

The icons – displayed on the LCD screen – will identify selected Mode.

Display	Title	Description
	Video mode	Recording video clips.
	Capture mode	Taking still photos.
	Playback mode	Preview photos and video clips.

Recording video clip

1: Turn on and set recorder to Video recording mode. Frame the scene in LCD screen. To quickly change resolution setting press **LEFT** button.

2: Press the **SHUTTER/ OK** button to start recording. Press the **RIGHT** button to pause and press it again to continue.

3: Press the **SHUTTER/ OK** button again to stop recording. If the memory is full the video camera will stop recording automatically.

• The LCD monitor displays the recorded time during recording.

Taking still images

1: Turn ON the video camera.

2: Press the **MODE** button to set the video camera to capture mode, the icon appears on the LCD screen.

3: Frame the scene or subject in LCD screen. To quickly change resolution setting press **LEFT** button.

4: Hold the video recorder steady and press the **SHUTTER/ OK** button to take a picture.

- **The number displayed on the LCD screen will decrease with each picture taken.**
- **No more pictures can be taken if the "Memory Full" message appears on the LCD screen – replace the SD card or download stored images into the computer.**
- **Make sure that your fingers do not cover the lens while recording video or taking still images.**
- **Do not remove the memory card or batteries when camera is saving the image, otherwise the data will be damaged.**

Using the Self-timer and Burst snapshot

When the **Self-timer** is set and activated, the camera will auto-take a picture after the selected delay time. Use the **burst snapshot** to take pictures continuously.

1: Turn the power ON, and set the video camera to the Capture mode.

2: Press the **RIGHT** button to select the Self-Timer options; please note icons and information displayed on left upper corner of the LCD screen.

2 seconds: The recorder will take picture with 2 seconds delay

10 Seconds: The recorder will take picture with 10 seconds delay

Continuous: Press the **SHUTTER/ OK** button once to take three consecutive pictures.

3: Press the **SHUTTER/ OK** button to take picture.

- **You can also set the self-timer and burst snapshot from the Capture Menu. See the details on page 21.**

Using the Zoom Function

This camera has a Digital Zoom function that allows you to zoom in (Tele) or zoom out (Wide) subjects or recorded scene.

1: Turn the camera ON and set it to Capture or Video Recording mode.

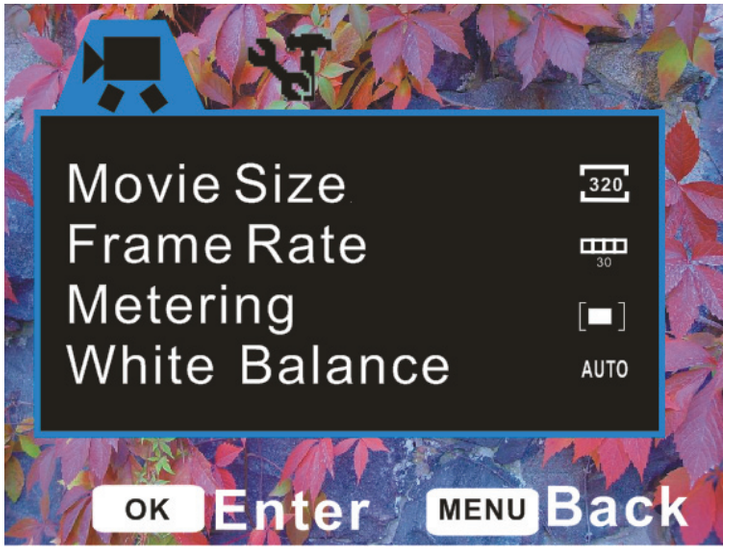
2: Press the **UP** or **DOWN** buttons to compose the scene as required.

UP: zoom in for a telephoto shot.

DOWN : zoom out for a wide-angle shot.

4. Using the Menu in recording mode

Menu in video mode



Turn ON the video recorder and set it to Video Recording mode.

1: Press the **MENU** button to display the menu.

2: Use the **UP** or **DOWN** button to select menu item.

3: Press the **SHUTTER/ OK** or **RIGHT** button to enter the sub-menu.

4: Use the **UP** or **DOWN** button to select the desired setting.

5: Press the **SHUTTER/ OK** button to confirm the setting.

6: Press the **MENU** button to close the menu.

Menu item	Function
Movie Resolution	Select smaller movie size (lower resolution) to record for longer time. There are three settings to choose: 1280x720/640x480/320X240. To quickly change resolution use the LEFT button
Frame Rate	Select low frame rate to record longer time. There are two settings to choose: High/ Low.
Metering	See the details on page 20.
White Balance	See the details on page 21.

Menu in capture mode

1: Turn ON the video recorder and set it to capture mode.

2: Press the **MENU** button to display the menu.

3: Use the **UP** or **DOWN** button to select menu item.

4: Press the **SHUTTER/ OK or RIGHT** button to enter the submenu.

5: Use the **UP** or **DOWN** button to select the desired item.

6: Press the **SHUTTER/ OK** button to confirm the setting.

7: Press the **MENU** button to close the menu.

Capture menu list

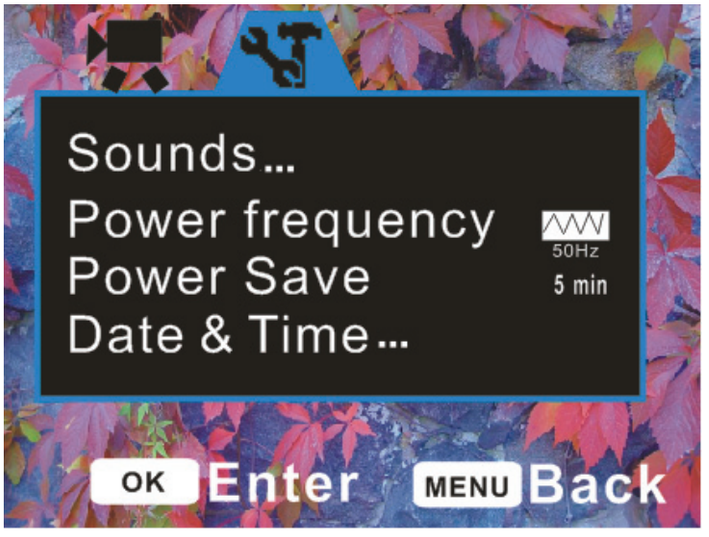
Menu item	Function
Resolution	There are four options to choose: [2592X1944]/[2048X1536]/[1280x960]/[640X480] To quickly change resolution use the LEFT button
Quality	Select a lower image quality to decrease the image size and thereby capture more images. There are three options to choose:[Super Fine] /[Fine] /[Normal].
Metering	Amend the metering method to change the brightness of the picture. [Center]: The exposure will be based on light in the central area. This setting is suitable for general use. [Multi]: The exposure will be based on the average light.

	[Spot]: The exposure will be metered based only on the spot in the center of the LCD screen
White Balance	Adjust the white balance to suit different light sources. There are five items to choose: [Auto] / [Daylight] / [Cloudy] / [Fluorescent] / [Bulb].
Exposure	Set the exposure value manually to suit unusual ambient conditions such as indirect indoor lighting, dark backgrounds, and strong backlighting. The exposure value may be set in range from –2.0 to 2.0.
Capture Mode	Select this and set the recorder to different modes: Off/ Self-timer 2S/ Self-timer 10S/ Continuous
Effect	Select this to change the color tone of images: Normal/ B&W/ Sepia / Negative/ Red/ Green/ Blue.

Setup menu / Internal setting

Adjust system settings in setup menu.

1: Turn the power ON and press the



MENU button to display the menu.

2: Press the **RIGHT** button to select [Setup].

3: Use the **UP** or **DOWN** button to select an item.

4: Press the **SHUTTER/ OK** or **RIGHT** button to enter the submenu.

5: Use the **UP or DOWN** button to select the desired item.

6: Press the **SHUTTER/ OK** button to confirm the setting.

7: Press the **MENU** button to close the menu.

Menu item	Function
Sounds	There are four settings to choose: [Shutter]: Set the **shutter sound** on or off by pressing the **RIGHT** button. [Start-up]: Set the **start-up sound** on or off by pressing the **RIGHT** button. [Beep]: Set the **operation sound** on or off by pressing the **RIGHT** button. [Volume]: Adjust the sound volume by pressing the **RIGHT** button.
Power	Power (also Light) Frequency should be set to 60Hz or

frequency	50Hz to match local power supply. [50HZ] / [60HZ].
Power save	To save power the recorder turns off automatically after selected time period: [1min.] / [3min.] / [5min.].
Date & Time	Refer to page 10.
Language	Refer to page 9.
TV Out	TV Out should be set either to NTSC or PAL to match regional broadcast signal: [NTSC] /[PAL].
USB	You may use recorder as a PC camera or removable disk. Select [MSDC]: to use as removable disk. Select [PCCAM]: to use as PC camera;
Format	Refer to page 8 for details.
Reset all	Reset the entire menu and button operation settings to initial default. [Yes]/ [No].

5. Playback

Playback still image

1: Turn ON the recorder and then press the **MODE** button to set to playback mode. The latest recorded file will show on LCD screen. If there are no any images stored, a message [No File] appears.

2: Press the **LEFT** or **RIGHT** buttons to browse the previous or next images.

Playing back movie clips

1: Press the **LEFT** or **RIGHT** button to select the movie clips you wish to play back.

2: Press the **SHUTTER/ OK** button to start playing. Press the **MENU** button to stop playing. Press the **UP** button to pause and press again to continue. Press the **RIGHT** button to fast forward and press the **LEFT** button to rewind.

Other functions in Playback mode

Viewing Thumbnail size files

Press the **DOWN** button to view the file in thumbnail mode. Use the **UP, DOWN, LEFT, RIGHT** button to select a file. Press the **SHUTTER/ OK** button to view the file in full screen.

Lock files

1: Press the **MENU** button in playback mode.

2: Press the **UP** or **DOWN** button to select the item [Lock].

3: Press the **SHUTTER/ OK or RIGHT** button to enter the submenu.

4: Use the **UP or DOWN** button to select option: [Lock/Unlock one]: Lock /Unlock current file. [Lock All]: Lock all files. [Unlock all]: Unlock all files.

5: Press the **SHUTTER/ OK** button to confirm the setting.

6: Press the **MENU** button to close the menu.

• The “key” icon will display on the LCD screen if the file has been locked. The locked file can not be deleted – unless “un-locked.”

Delete files

1: Press the **MENU** button in playback mode.

2: Press the **UP** or **DOWN** button to select the item [Delete].

3: Press the **SHUTTER /OK** or RIGHT button to enter the submenu. [One]: Delete current file. [All]: Delete all files except locked files.

4: Use the **UP or DOWN** button to select the item.

5: Press the **SHUTTER/ OK** button to confirm the setting. A dialog box will appear. Using **UP** or **DOWN** button to select the item [Yes].

6: Press the **SHUTTER/ OK** button to delete the current file or all files.

* For quick deletion of the picture or video displayed on LCD, press the Display/ Delete button. Select Yes or No option by pressing Up or Down buttons and then press the **SHUTTER/ OK** button to execute choice. See page 13 for using button to adjust LCD display.

Play a slide show

1: Press the **MENU** button in playback mode.

2: Press the **UP** or **DOWN** button to select the item [Slide Show].

3: Press the **SHUTTER/ OK** or RIGHT button to enter the submenu.

[Start]: Select this item to start slide show mode.

[Interval]: Set the interval time by pressing the **LEFT** or **RIGHT** button. The interval time range is from 1 second to 10 seconds.

[Repeat]: Press the **LEFT** or **RIGHT** button to set the repeat function on or off.

4: Use the **UP or DOWN** button to select [Start].

5: Press the **SHUTTER/ OK** button start slide show.

6: Press the **MENU** button to end slide show.

• **Only still images can be shown as the slide show.**

Effect

1: In Playback mode, select and display the photo you want to change color tone. Press the **MENU** button.

2: Press the **UP** or **DOWN** button to select the [Effect].

3: Press the **SHUTTER/ OK or RIGHT** button to enter the submenu: [B&W], [Sepia], [Negative], [Red], [Green], [Blue], [Binarize], [Sunset], [Warm], [Cold], [Contrast].

4: Press the **UP** or **DOWN** button to select an effect changing color tone

of the image.

5: Press the **SHUTTER/ OK** button to confirm the setting. A duplicate photo with the desired color tone will be created and stored in SD card.

Rotate the image

1: Select an image you want to rotate in playback mode.

2: Press the **MENU** button to display the menu.

3: Press the **UP** or **DOWN** button to select the item [Rotate].

4: Press the **SHUTTER/ OK** or RIGHT button to launch the submenu:

Rotate: Each time the **SHUTTER/ OK** button is pressed the image will rotate 90° .

Save: Select this item to save the rotated image.

Back: Select this item to close the submenu.

Resize

1: Select an image you want to resize in playback mode.

2: Press the **MENU** button to display the menu.

3: Press the **UP** or **DOWN** button to select the item [Resize].

4: Press the **SHUTTER/ OK** or **RIGHT** button to launch the submenu: 2048x1536/ 1280x960/ 640x480.

5: Press the **UP** or **DOWN** button to select the item.

6: Press the **SHUTTER /OK** button to save the resized image.

• The image can only be resized only to the smaller size.

Add voice memo to image

1: Select an image to which you wish add voice memo in playback mode.

2: Press the **MENU** button to display the menu.

3: Press the **UP** or **DOWN** button to select the item [voice memo].

4: Press the **SHUTTER/OK or RIGHT** button to display the dialog box as illustration.

5: Select the item [Add] and then press the **SHUTTER/OK** button to start recording voice memo.

6: Press the **SHUTTER/ OK** button to end the recording.

7: To playback voice memo please first select desired photo with microphone icon and then press the **SHUTTER/ OK** button

• To cancel the voice memo please select [Delete] when the dialog box appears and then press the SHUTTER/ OK button to delete the memo.

6. Making connections

Connecting the Video Recorder to a TV

You may connect camera to TV, then display all images and recorded video on large TV screen!

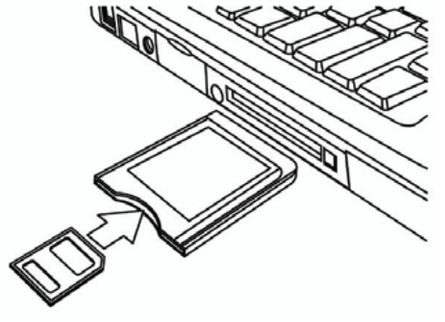
1. Connect the recorder to a TV using supplied AV/TV cable.
2. Turn ON the TV and the camera; set the TV to AV INPUT mode, review the manual for your TV if necessary.
3. When recorder is set to recording mode, you can preview the subjects you wish to record on the TV screen.
4. At the Playback mode, all the pictures, video and audio clips stored in the camera can be reviewed and played back on the TV screen.

When the TV is connected, the cameras LCD screen becomes blank and TV screen becomes the monitor for your camera.

Connecting the Video Recorder to a PC

Open the USB cover on the top of the recorder with a fingernail and swing out the USB connector. Insert connector into computer USB port. If necessary, use the supplied USB extension cable to gain easier access to connect. Download files from the recorder's stored memory to computer. Alternatively insert the memory card into a card reader to download files.

Using a Card Reader



1: Eject the memory card from the recorder and insert into a card reader connected to a computer.

2: Open [My Computer] or [Windows Explorer] and double-click the Removable Disk icon which represents the

memory card.

3: Copy images from the card into selected directory / storage inside your computer.

Connecting the Recorder to a PC using USB connector

1: Select the Item [USB] in Setup Menu and then select [MSDC] option to set the USB mode to [MSDC] mode. Turn OFF the recorder.

2: Connect the recorder to the computer USB port with the USB connector and turn ON the recorder. A message “MSDC” appears on the screen when connection to the computer has been successfully completed.

3: Open [My Computer] or [Windows Explorer]. A "Removable Disk" appears in the drive list. Double-click the "Removable Disk" icon to view its contents. The "DCIM" folder contains all stored video and still images files.

4: Copy photos or video files into your computer.

7. Software Installation

Installing the Software

Supplied installation CD contains bundled Arcsoft MediaImpression program and the Driver for the camera.

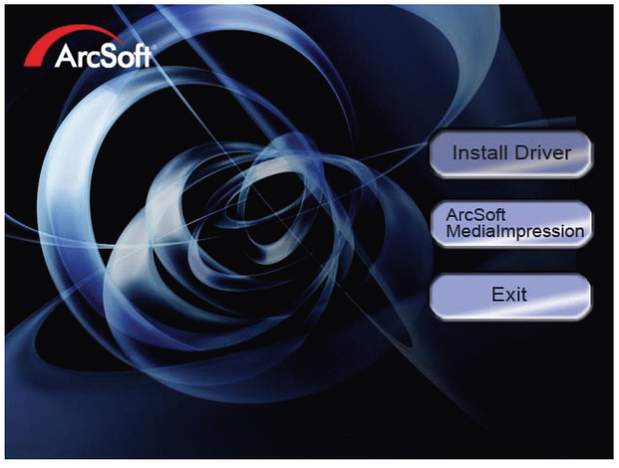
- **Installed** Driver is necessary to use your camera as PC/ webcam.
- **Installed** Arcsoft Mediaimpression program is useful for editing pictures and recorded video clips.

Arcsoft MediaImpression works with Windows 2000/XP, Vista & Windows 7 platforms.

Install ALL programs BEFORE connecting camera with computer.

-Insert the CD into your CD-ROM drive.

-The auto-run menu appears:



Click the items in the autorun menu to install the software.

If the autorun menu does not appear automatically, open the CD-ROM in [My Computer] or [Windows Explorer] and double-click the file named [autorun.exe] to start the program. You can also click [Run] in the Windows Startup menu, enter "D:\autorun.exe" (where D is your CD-ROM drive letter) in the text box, and click [OK].

Install Driver

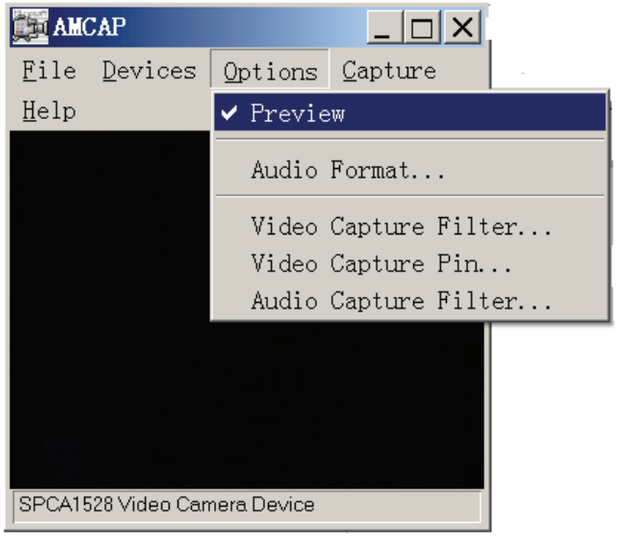
1: Click [Install Driver].

2: Follow the on-screen instructions to install the drivers.

How to use the PC Camera function

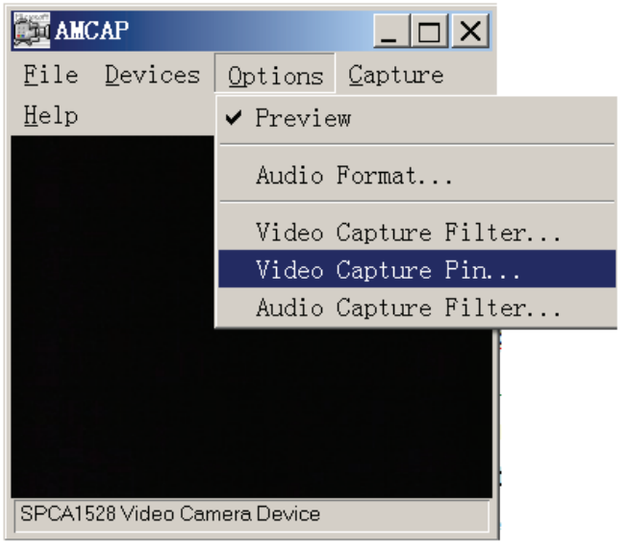
1: Please install the camera **Driver** first.

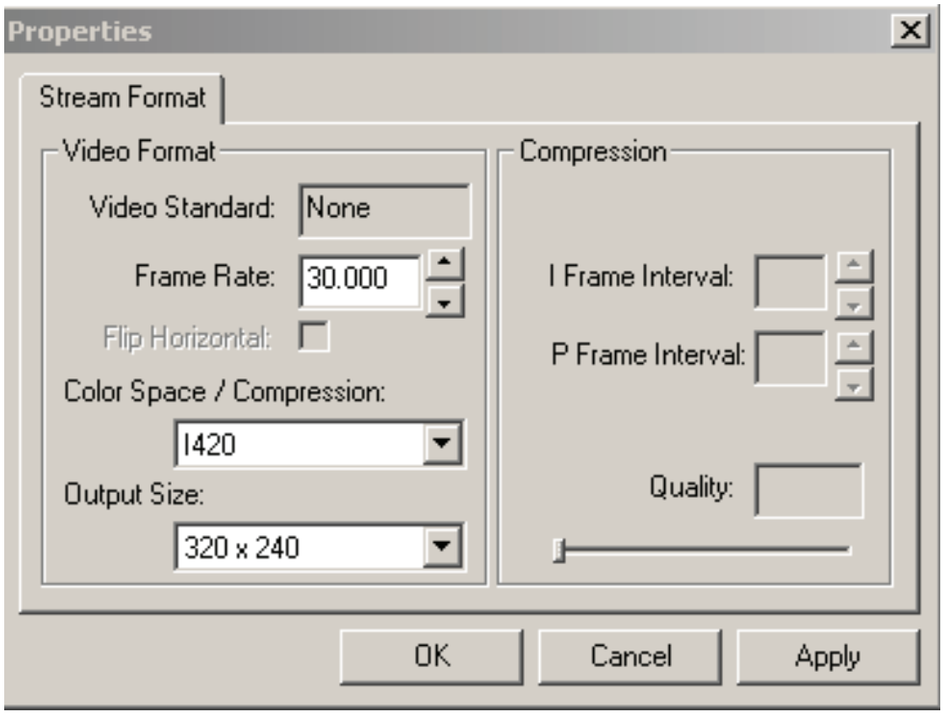
2: Installed Driver will create the Amcap program icon on computer's Desktop. Select the Item [USB] in Setup Menu and



then select [PCCAM] option to set the camera to PC CAM mode. Connect the camera to the computer with the USB connector. Run the program Amcap on the desktop. Using this function for the first time please select <Preview> as shown on illustration. Now you can use your recorder as the PC camera function.

If you want to change the imaging size, select <Video Capture Pin> to change the Output Size.





8. Troubleshooting

Power does not turn on.	
1.Batteries are inserted in wrong direction.	★Reinstall batteries in the correct direction.
2.Battery power insufficient	★Reinstall new batteries.
Camera does not take pictures.	
1. Memory is full.	★Insert a new memory card.
2. Memory card is not formatted.	★Format card or use new card.
Image is blurry or out of focus.	
1. Video recorder was moving when image was captured.	★Hold the video recorder steady when shooting picture.
Image is not displayed on the LCD monitor.	
1. A memory card with non-SUNP**** images (recorded with other camera) is loaded.	★ This video camera cannot display non-SUNP**** images.
Recorded images are not saved in memory.	
1.Video recorder was turned off before images were saved.	★If battery low indicator appears replace batteries immediately.

9. Technical Specifications

Video Res	1280x720,640x480,320x240; pixels
Still pictures	5MP(2592x1944);3MP(2048x1536); 1.3MP(1280x960);VGA(640x480);pixels
Display	1.8" TFT Color LCD
Focus range	5 feet ~ infinity
Aperture	F3.0, f=7.0mm. Fixed Focus
Shutter	Auto Electronic Shutter: 1/2000 ~ 1/2sec.
White balance	Auto / Daylight / Bulb / Fluoresce / Cloudy
Digital zoom	Up to 4x range
Exposure control	-2EV to +2EV in 0.3 steps
Burst mode	3 consecutive shots captured
Photo effect	Normal/ B&W/ Sepia / Negative/ Red/ Green/ Blue
Self-timer	2 or 10 second time delay options
Storage	External memory card slot: Accepts up to 8GB SD / SDHC card

TV system	NTSC / PAL selectable
Power Supply	Three (3) AAA alkaline 1.5V batteries (not supplied)
Ambient temperature	Operating: 0° C to 40° C Storage: -20 to 60° C
Microphone	Built-in
Speaker	Built-in
Dimensions	4.5 x 2.4 x 1.1 inches (115 x 62x 28mm)
Weight	Approx. 4oz (120gms) Recorder without battery

Note: The product design and the specifications are subject to change without notice.

2. System requirements：

Windows 2000/ XP/ Vista/ **7**

CPU: Pentium III 800MHz and above

Memory：64 MB and upper memory

Disk space：At least 128 MB space free